

Bright spots, physical activity investments that work: Sweatcoin: a steps generated virtual currency for sustained physical activity behaviour change

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BACKGROUND AND DESCRIPTION OF THE CONCEPT

Sweatcoin converts the step count recorded on smartphones into a virtual currency. Using this app, users generate financial rewards through physical activity, with higher levels of activity creating a higher 'income'. Sweatcoins can subsequently be used to purchase commercially available products from an in-app marketplace.

The aim of Sweatcoin is to provide immediate reward to sedentary populations who lack motivation to exercise despite its value in terms of improved health outcomes.¹ Health benefits from physical activity are slow to emerge and hence require long-term engagement that relies on self-motivation. Incentives have been found to be effective as an immediate reward for exercise with individuals subsequently increasing levels of physical activity in return for payments or products.¹⁻³ However, incentives-for-exercise programmes are often limited to short-term trials through limited funding. There is a risk that stopping an incentives programme makes it more difficult to drive sustainable levels of physical activity behaviour change, even if the programme delivers behaviour change in the short run.² The Sweatcoin concept has been developed to solve this issue, by providing a continuous incentive to be physically active (see figure 1).

In less than 20 months after launching, Sweatcoin has had more than 20 million users installing the app globally. It has 300 partners regularly offering products on the marketplace. Products range from low-value items such as free subscriptions to apps and music services, through

to high-value items, including TVs and smartphones. Furthermore, it is possible to transfer coins, allowing users to pay for services or goods outside of the Sweatcoin market-place.

WHY SWEATCOIN WORKS

Sweatcoin works as a very simple concept: to convert physical activity (measured through step count) into a virtual currency, creating the incentive that you earn more if you move more. Unlike many other incentive schemes and fitness trackers, there are no explicit goals a user has to achieve to be rewarded; the incentive is continuous. The goal setting becomes implicit in the products that a user desires to purchase on the marketplace, that is, they must earn enough currency to purchase their chosen product while it remains available. The marketplace is structured to contain a mix of products, with a daily rotation of low-priced offers that users can obtain with just one or two days of activity, combined with large items (TVs, smartphones) that would take around 12 months to obtain. The currency remains robust by using a proprietary algorithm to verify the steps recorded are genuine.

This concept has led to sustainable behaviour change in physical activity. An analysis of 6000 Sweatcoin users' daily step count data shows an overall mean increase of 19.5% over the 6-month period after download, compared with their average activity in the 3 months prior. Importantly, this increase remains throughout the 6-month period analysed.⁴

LESSONS LEARNT

Feedback from users through focus groups has highlighted that Sweatcoin allows people to look back and feel good about their achievements, by seeing the number of coins earned that day. This is in contrast to setting future goals, which if not achieved, can have negative effects on

Programme card

- ▶ Country/locality/coverage:
 - UK, USA, Canada, Australia and Northern Europe.
- ▶ Target population:
 - Adults with sedentary lifestyles.
- ▶ Physical activity promotion:
 - Sustained increased outdoor walking or running, measured by step count on a smartphone.
- ▶ Which of the seven best investments the programme addresses?
 - Active transport.
 - Community-wide programmes.
- ▶ What sectors does it involve?
 - This is a technology-driven approach to the general population with the incentive-based structure also a potential attraction to workplace well-being programmes.
- ▶ Estimated programme reach:
 - Currently 20 million downloads (October 2018) with 5 million monthly users.
- ▶ What is special about this programme?
 - Users generate virtual currency by being physically active; continuous incentive to move more and earn; rewards can be purchased from a marketplace consisting of low and high-value products. Impact of the concept shows sustained physical activity behaviour change over a 6-month period.
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 - Anton Derlyatka, Co-Founder, Sweatco, anton@sweatco.in
 - Oleg Fomenko, Co-Founder, Sweatco, oleg@sweatco.in
- ▶ Programme website and/or Twitter handle:
 - www.sweatco.in
 - @sweatcoin, @dr_mte

motivation.⁵ Feedback has also highlighted the differences between users in terms of how they use the currency for reward. Some users prefer the immediate reward of spending the currency on lots of smaller products, while others prefer to save—either towards a high-cost item or to wait for a particular product to appear back on the marketplace. Hence, the diversity of spending habits of physical currency is reflected in this virtual currency.

It is important to maintain the integrity of the currency, rewarding only genuine

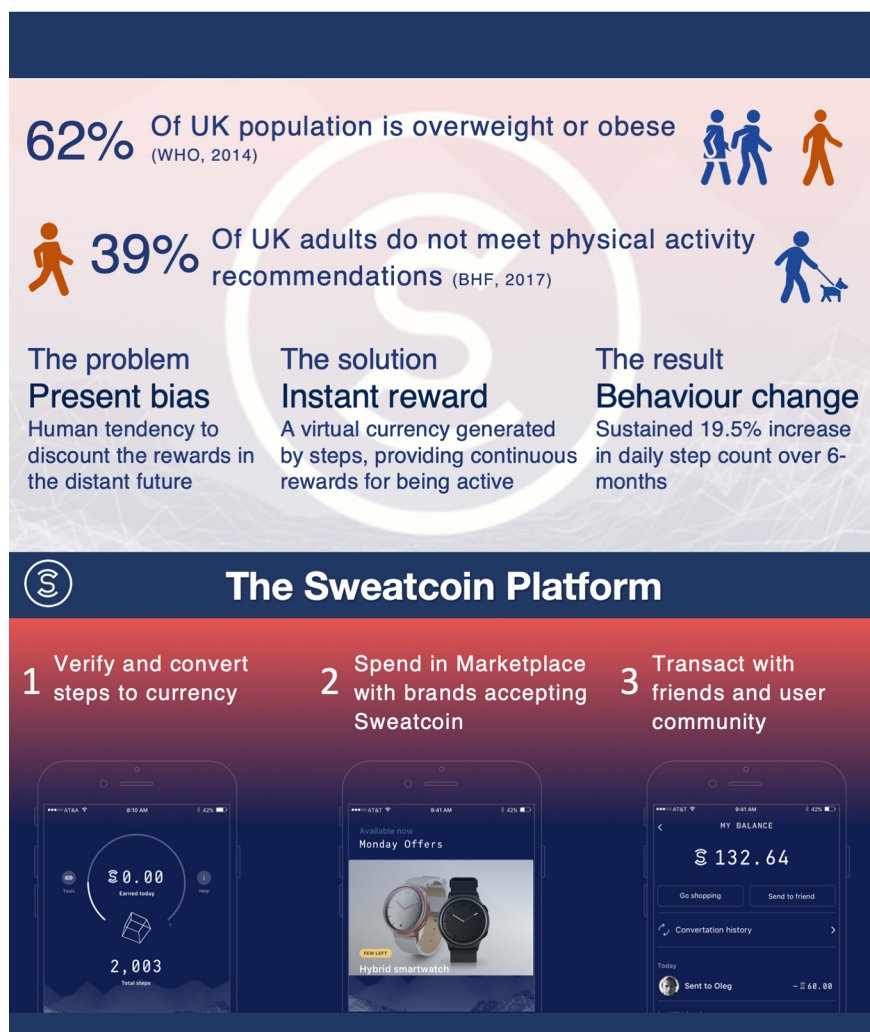
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Competing interests MTE received a grant in partnership with Sweatco from Innovate UK. He was provided with an honorary unpaid research position with Sweatco to oversee the data analysis. He has no financial interests in Sweatco. FE was provided with an honorary unpaid research position with Sweatco and use of data from the Sweatcoin app. She has no financial interests in Sweatco. AD and OF are directors and shareholders of Sweatco. Sweatco received a grant in partnership with MTE (University of Warwick) from Innovate UK to conduct the study. EK is an employee and shareholder of Sweatco.

Patient consent Not required.

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Figure 1 Sweatcoin infographic.

steps and ensuring the concept cannot be 'gamed' or cheated. This has required the use of a second-level verification algorithm that relies on the Global Positioning System and hence only rewards outdoor steps. Clearly, many users are also active indoors, for example, in the gym or working on a shop floor, and Sweatcoin has focused on developing future verification algorithms that will also reward genuine steps indoors.

Overall, Sweatcoin has achieved sustainable physical activity behaviour

change using a viable business model that can continuously reward its users for being active. Future public health organisations may benefit from establishing partnerships with the commercial sector to deliver sustainable incentive-driven programmes.

Contributors AD, OF and EK are founders of Sweatcoin and the overall concept. MTE, FE, AD, OF and EK were involved in data analyses mentioned in the manuscript. MTE and FE hosted the focus groups and wrote the manuscript. AD, EK and OF reviewed and edited the manuscript.